IN THE CLAIMS

The status of each claim in the present application is listed below.

Claims 1-29: (Canceled).

30. (New) A double-stranded oligonucleotide comprising two strands of 19 to 23 nucleotides, each strand consisting, from 5' to 3', of a sequence of 17 to 21 ribonucleotides and two deoxyribo- or ribonucleotides, the 17 to 21 ribonucleotide RNA sequences of said strands being complementary and the two nucleotides of the 3' ends being protruding,

wherein the RNA sequence of the sense strand or positive strand is selected from the group consisting of a 17 to 21 ribonucleotide fragment of a transcript of a protein kinase CK2 beta-subunit which is included between positions 80-100, from the ATG codon, with reference to the human transcript sequence SEQ ID NO: 90, and a 17 to 21 ribonucleotide fragment having at least 80 % identity with the preceding fragment,

wherein the sequence of the sense strand or positive strand is selected from the group consisting of the sequences SEQ ID NO: 67, 83 and 86, and

wherein the double-stranded oligonucleotide inhibits specifically more than 80% of the expression of the protein kinase CK2 beta-subunit and of the corresponding mRNA in human cell culture at a concentration of between 1 and 200 nM.

31. (New) The double-stranded oligonucleotide as claimed in Claim 30, wherein each of the strands further comprises a phosphate group in the 5' position and a hydroxyl group in the 3' position.

32. (New) The double-stranded oligonucleotide as claimed in Claim 30, wherein said two protruding nucleotides of the 3' ends are identical.

33. (New) A single-stranded oligonucleotide consisting of the antisense strand or negative strand of the double-stranded oligonucleotide as claimed in Claim 32.

34. (New) The oligonucleotide as claimed in Claim 30, which is a stabilized oligonucleotide.

35. (New) A precursor of the oligonucleotide as claimed in Claim 30, which is selected from the group consisting of:

a) the sense and antisense strands of the oligonucleotide as claimed in Claim 30,

b) a double-stranded oligodeoxyribonucleotide formed by, either a first strand corresponding to the sense or antisense strand of the oligonucleotide as claimed in Claim 30 and a second strand complementary thereto, or two strands corresponding to the sense and antisense strands of the oligonucleotide as claimed in Claim 30,

c) a hairpin oligoribonucleotide comprising the sequences of the sense and antisense strands of the double-stranded oligonucleotide as claimed in Claim 30,

d) a double-stranded oligodeoxyribonucleotide made up of a sense strand corresponding to the oligonucleotide defined in c) and of an antisense strand complementary thereto.

36. (New) An expression cassette, comprising at least one precursor as defined in Claim 35, under the control of appropriate transcriptional regulatory elements.

37. (New) An expression vector, comprising the cassette as defined in Claim 36.

38. (New) The expression vector as claimed in Claim 37, wherein the expression vector is a DNA vector comprising a DNA precursor as defined in b) and d) included in an expression cassette.

39. (New) A eukaryotic or prokaryotic cell, wherein the eukaryotic or prokaryotic cell is modified with an oligonucleotide as claimed in Claim 30.

40. (New) A pharmaceutical composition, comprising at least one oligonucleotide as claimed in Claim 30, one precursor of said oligonucleotide or one expression vector comprising said precursor.

41. (New) The pharmaceutical composition as claimed in Claim 40, wherein said oligonucleotide, precursor or vector is associated with at least one substance that makes it possible to cross the plasma membrane.

42. (New) The pharmaceutical composition as claimed in Claim 40, wherein said oligonucleotide, precursor or vector is associated with at least one substance that allows targeting into cells, tissues or organs.

43. (New) The pharmaceutical composition as claimed in Claim 40, wherein said oligonucleotide, precursor or vector is combined with at least one antiviral or anticancer agent.

44. (New) The pharmaceutical composition as claimed in Claim 40, comprising a mixture of several oligonucleotides or of their precursors, or else one or more expression vectors for said mixture of oligonucleotides.

45. (New) A product containing at least one oligonucleotide as claimed in Claim 30, and an anticancer active ingredient, as a combined preparation for simultaneous, separate or sequential use, in the prevention and/or treatment of cancer.

46. (New) A product containing at least one oligoribonucleotide as claimed in Claim 30, and an antiviral active ingredient, as a combined preparation for simultaneous, separate or sequential use, in the prevention and/or treatment of viral diseases.

47. (New) The pharmaceutical composition as claimed in Claim 40, comprising a mixture of at least one oligonucleotide specific for a protein kinase CK2 alpha-subunit, at least one oligonucleotide specific for a protein kinase CK2 alpha'-subunit and at least one oligonucleotide specific for a protein kinase CK2 beta-subunit.